FIG.1a

NgR	1	MKRASSGGSRLLAWVLWLQAWRVAT
NgR2	1	MLPGLRRLLQGPASACLLLTLLALPPVTP
NgR3	1	MLRKGCCVELLLLLLAGELPLSG

	26	PCPGACVCYNEPKVTTSCPQQGLQAVPTGIPASSQRIFL
LRRNT	30	SCPMLCTCYSSP-PTVSCQANNFSSVPLSLPPSTQRLFL
	24	GCPRDCVCYPSP-MTVSCQAHNFAAIPEGIPEDSERIFL

	65	HGNR-ISYVPAASFQSCRNLTILWL
	68	QNNL-IRSLRPGTF--GPNLLTLWL
	62	QNNH-ITFLQQGHF--SPAMVTLWI

	89	HSNA-LAGIDAAAFTGLTLIEQLDL
	90	FSNN-LSTIYPGTFRHLQALEELDL
	84	YSNN-ITFIAPNTFEGFVHLEELDL

	113	SDNAQLRVLDPTTFRGLGHLHTLHL
	114	GDNRHLRSLEPDTFQGLERLQSLHL
	108	GDNRQLRTLAPETFQGLVKLHALYL

	138	DRCG-LQELGPGLFRGLAALQYLYL
	139	YRCQ-LSSLPGNIFRGLVSLQYLYL
	133	YKCG-LSSLPAGIFGGLHSLQYLYL

	162	QDNN-LQALPDNTFRDLGNLTHLFL
	163	QENS-LLHLQDDLFADLANLSHLFL
	157	QDNH-IEYLQDDIFVDLVNLSHLFL

	186	HGNR-IPSVPEHAFRGLHSLDRLLL
	187	HGNR-LRLLTEHVFRGLGSLDRLLL
	181	HGNK-LWSLGQGIFRGLVNLDRLLL

FIG.1b

```
                210    HQNH-VARVHPHAFRDLGRLMTLYL
                211    HGNR-LQGVHRAAFHGLSRLTILYL
                205    HENQ-LQWVHHKAFHDLHRLTTLFL

                234    FANN-LSMLPAEVLVPLRSLQYLRL
                235    FNNS-LASLPGEALADLPALEFLRL
                229    FNNS-LTELQGDCLAPLVALEFLRL

                258    NDNPWVCDCRARPLWAWLQKFRGSSSEVPCNLPQRLAGRDLKRLAASDLEGC
 LRRCT          259    NANPWACDCRARPLWAWFQRARVSSSDVTCATPPERQGRDLRTLRDTDFQAC
                253    NGNAWDCGCRARSLWEWLRRFRGSSSVVPCATPELRQGQDLKSLRVEDFRNC

                310    AVASGPFRPFQTNQLTDEELLGLPKCCQPDAADKASVLEPGRPASAGNALKGR
                311    PPPT---------------------PTRPGSRARGNSSSNHLYGVAEAGAPP
                305    TGPASPHQIKSHTLSTSDRAARKEHHPSHGASRDKGH-PHGHLPGSRSGSKKP

                368    VPPGDTPPGNGSGPRHINDSPFGTLPGSAEPPLTALRPGGSEPPGL-------
                342    ADPSTLYRDLPAEDSRGRQGGDAPTEDDYWGGYGGEDQRGEQTCPGAACQAPA
                357    GKNCTSHRN-RNQISKGSAGKELPELQDYAPDYQHKFSFDIM----------

                409    PTTGPRRRPGCSRKNRTRSHCRLGQAGSGSSGTGDAEGS
                394    DSRGP----------------------------------
                398    PTARPKRKGKCARRTPIRAPSGVQQA-------------

                448    GALPALACSLAPLGLALVLWTVLGPC
 GPI            399    VLSAGLRTPLLCLLLLAPHHL
                424    SSGTALGVSLLAWILGLVVSLR
```

lectin activity
'unique' domain

FIG. 1b-1
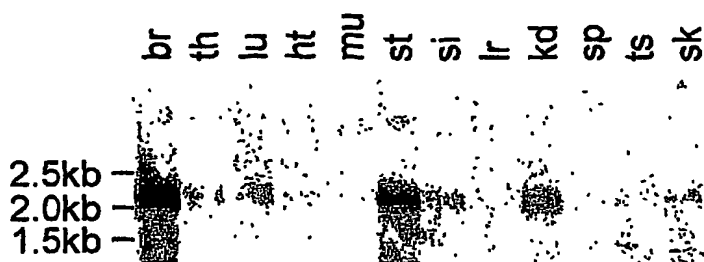
FIG.2a

FIG.2b

FIG.2c

FIG.2d

FIG.3

1 2 3 4 5 6 7 8 9 10 11 12 13

75kd –

25kd –

FIG.4a

70kd –

9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0

22kd –

FIG.4b

PBS #1
PBS #2
0.5M NaCl

75kd –

NgRu Cos
BACTERIAL

25kd –
15kd –

FIG.4c   # FIG.4d

FIG.5a

FIG.5b
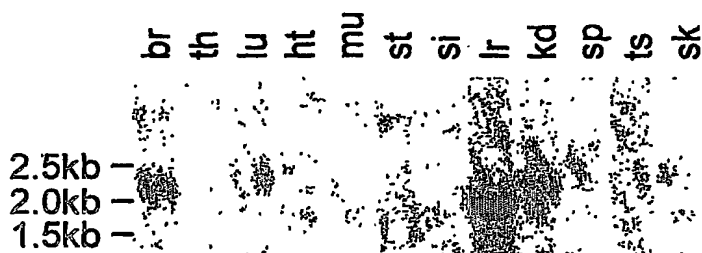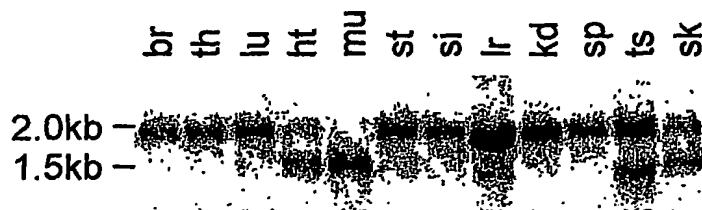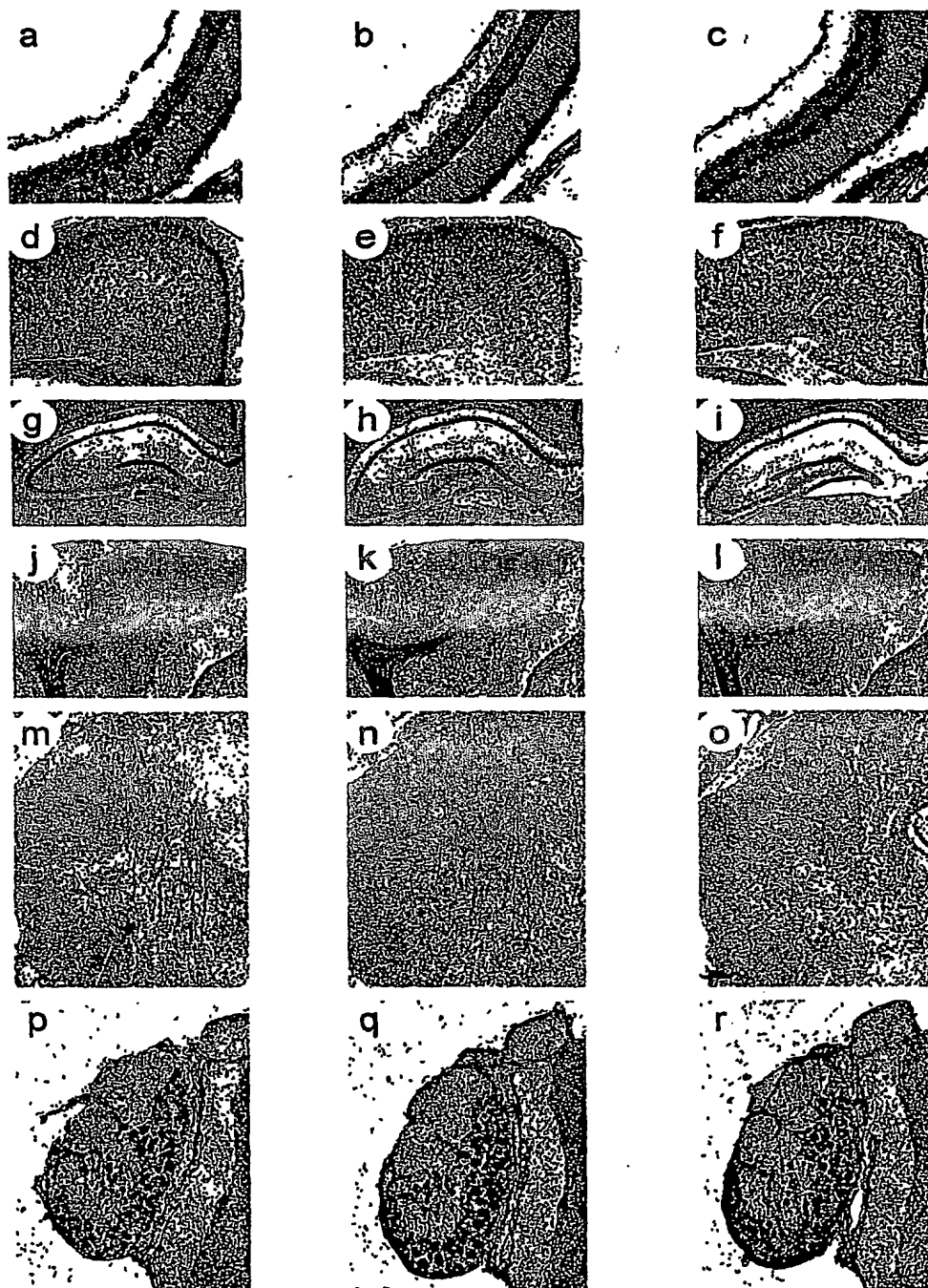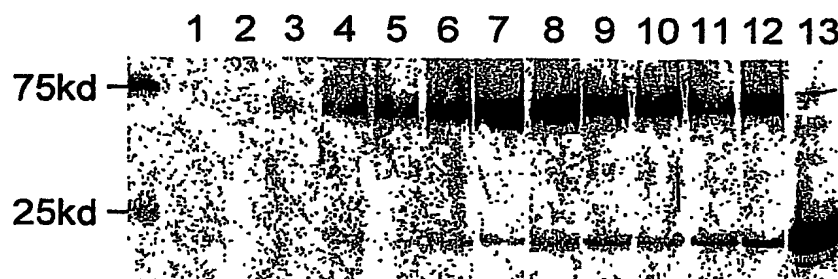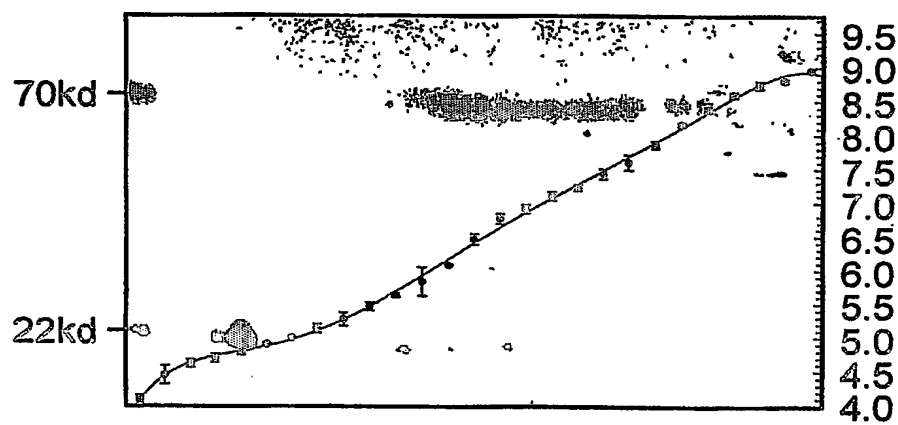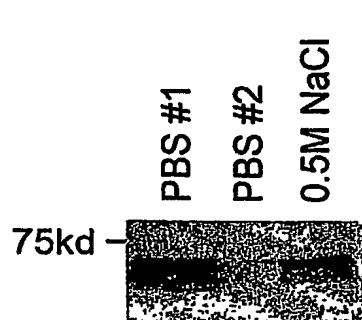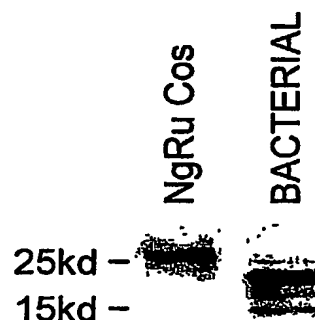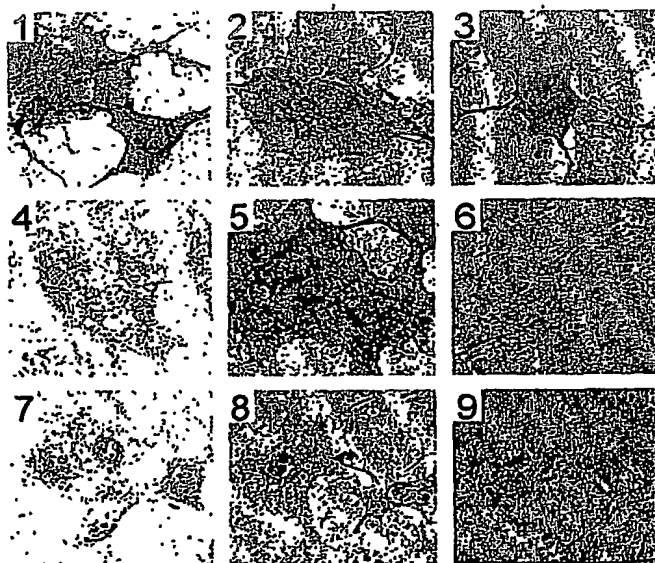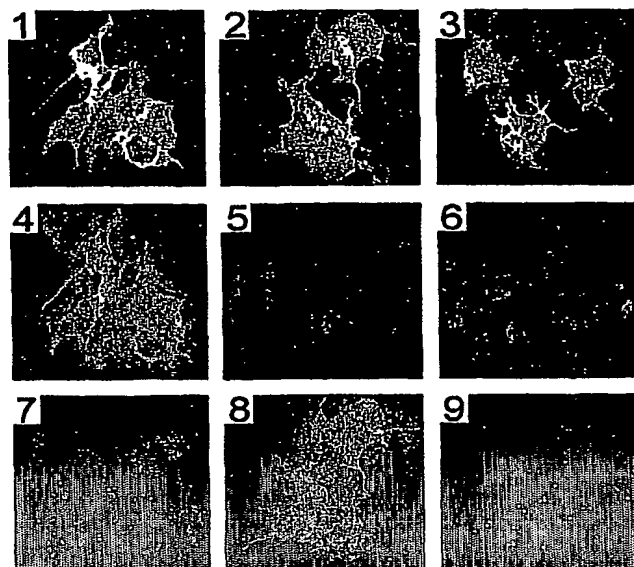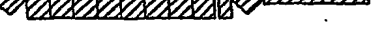
NgR Domain Organization (8 LRRs)	Nogo–66	MAG–Fe	OMgp
NgR1	+++	+++	+++
NgR2	–	+++	–
NgR3	–	–	–
LRR 1–8	+++		
unique	–		
LRR 1+3	+		
LRR 3–8	+++		
LRR 1–5	+		
LRR 5–8	+		
ΔLRR 6	–		
2x LRR 6	–		

FIG.5c
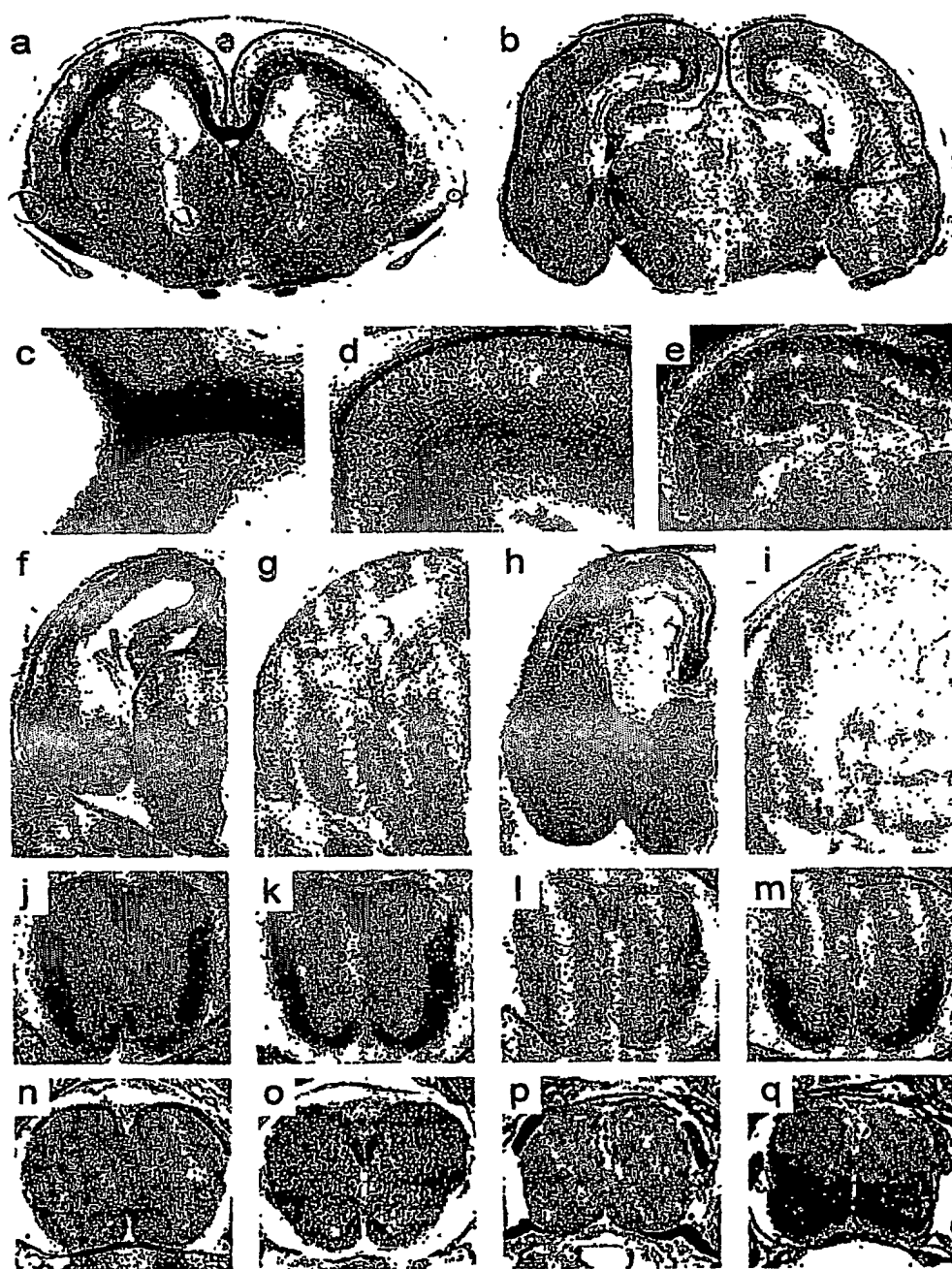
FIG.6

FIG.7a
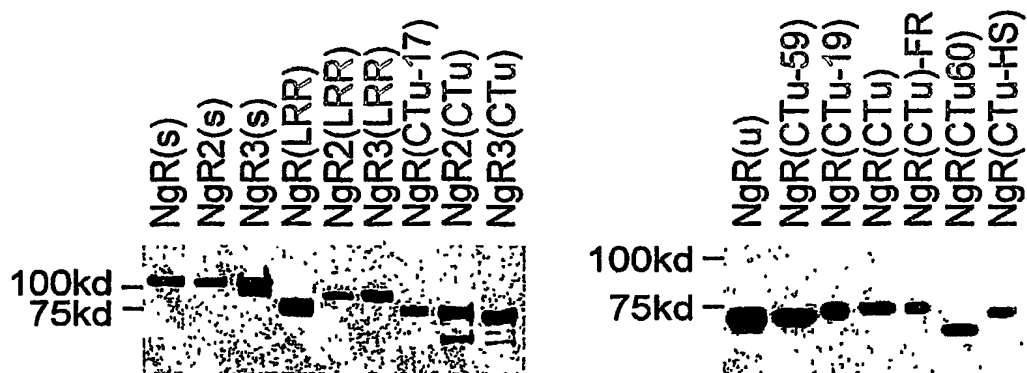
FIG.7b
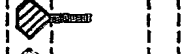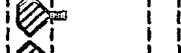
Construct	bdg to brain
sNgR	+++
sNgR2	–
sNgR3	+++
sNgR(LRR)	–
sNgR3(LRR)	–
sNgR(CTu)	+++
sNgR(unique)	–
sNgR(CTuΔ59)	–
sNgR(CTuΔ19)	–
sNgR(CTuΔ17)	+++
sNgR(CTu)–FR	++
sNgR(CTuΔHS)	+/–
sNgR(CTu60)	+
sNgR(CTu41)	–
sNgR2(CTu)	–
sNgR3(CTu)	+++

FIG.7c

```
NgR.........WLQKFRGSSSE...
NgR2........WFQRARVSSSD...
NgR3........WLRRFRGSSSV...
MAG.........GKYYFRGOLGG...
Sn..........SGYNFRFEISD...
L1..........YVHYFRVTAIN...
TAG/αx-1.....MDYEFRVSASN...
```
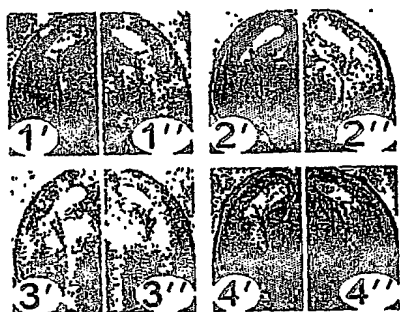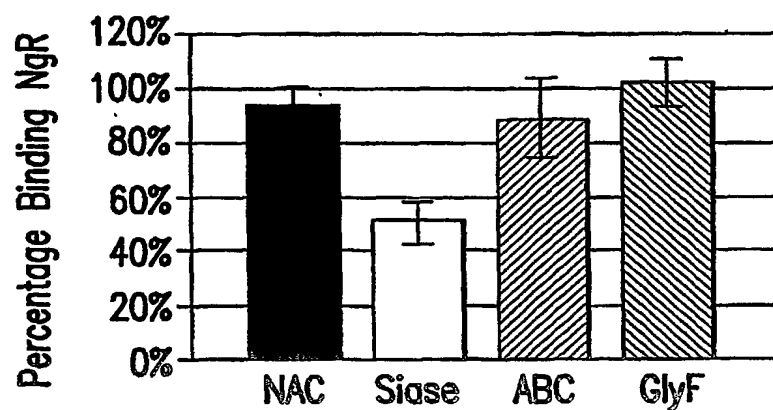
FIG.7d

FIG.7e

FIG.7f

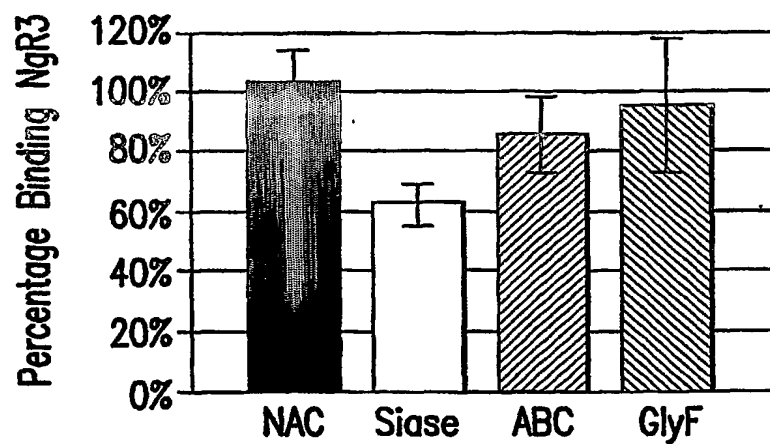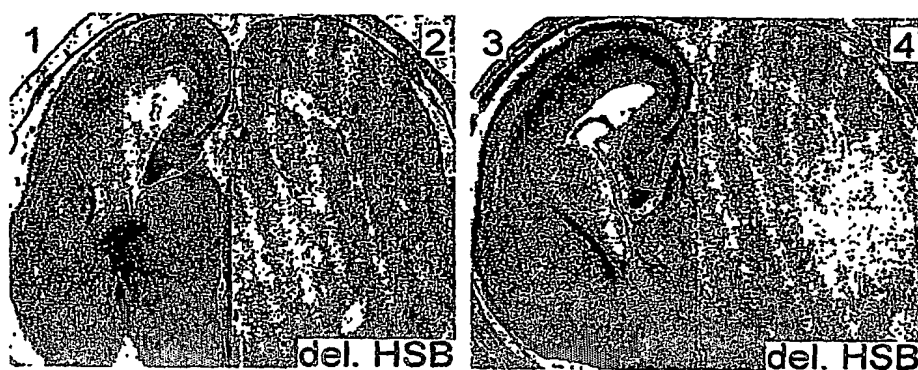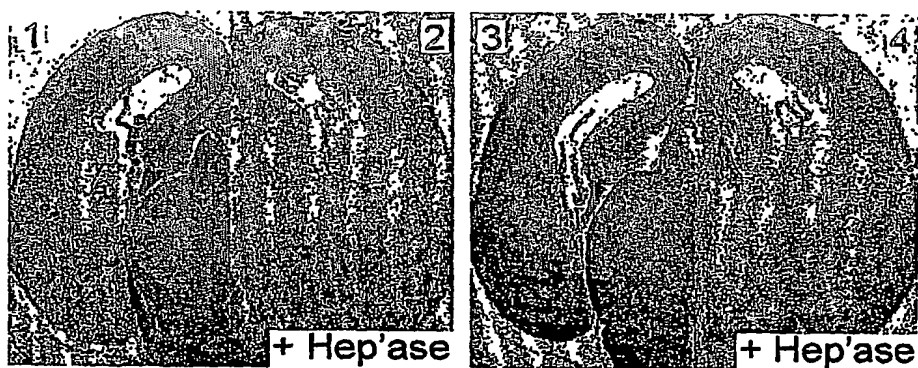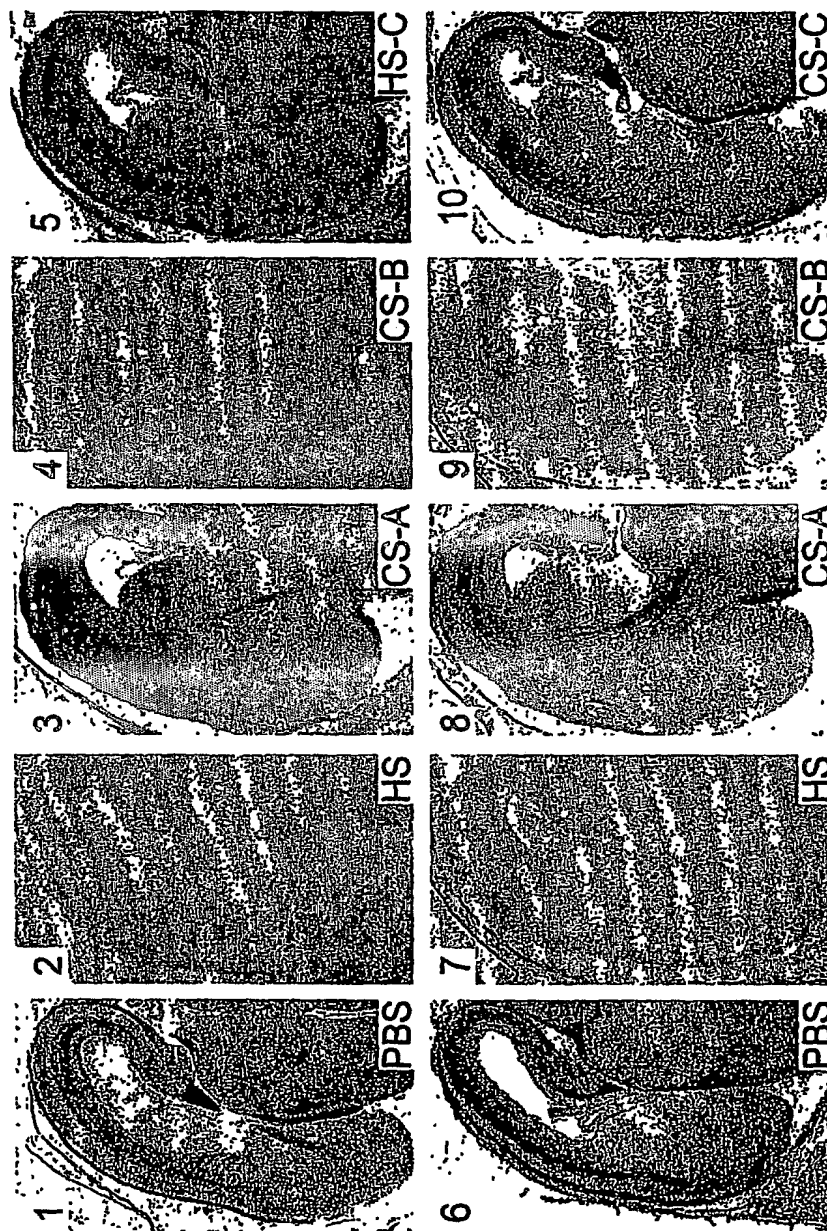
FIG.7g

FIG.8a

FIG.8b

FIG.8c
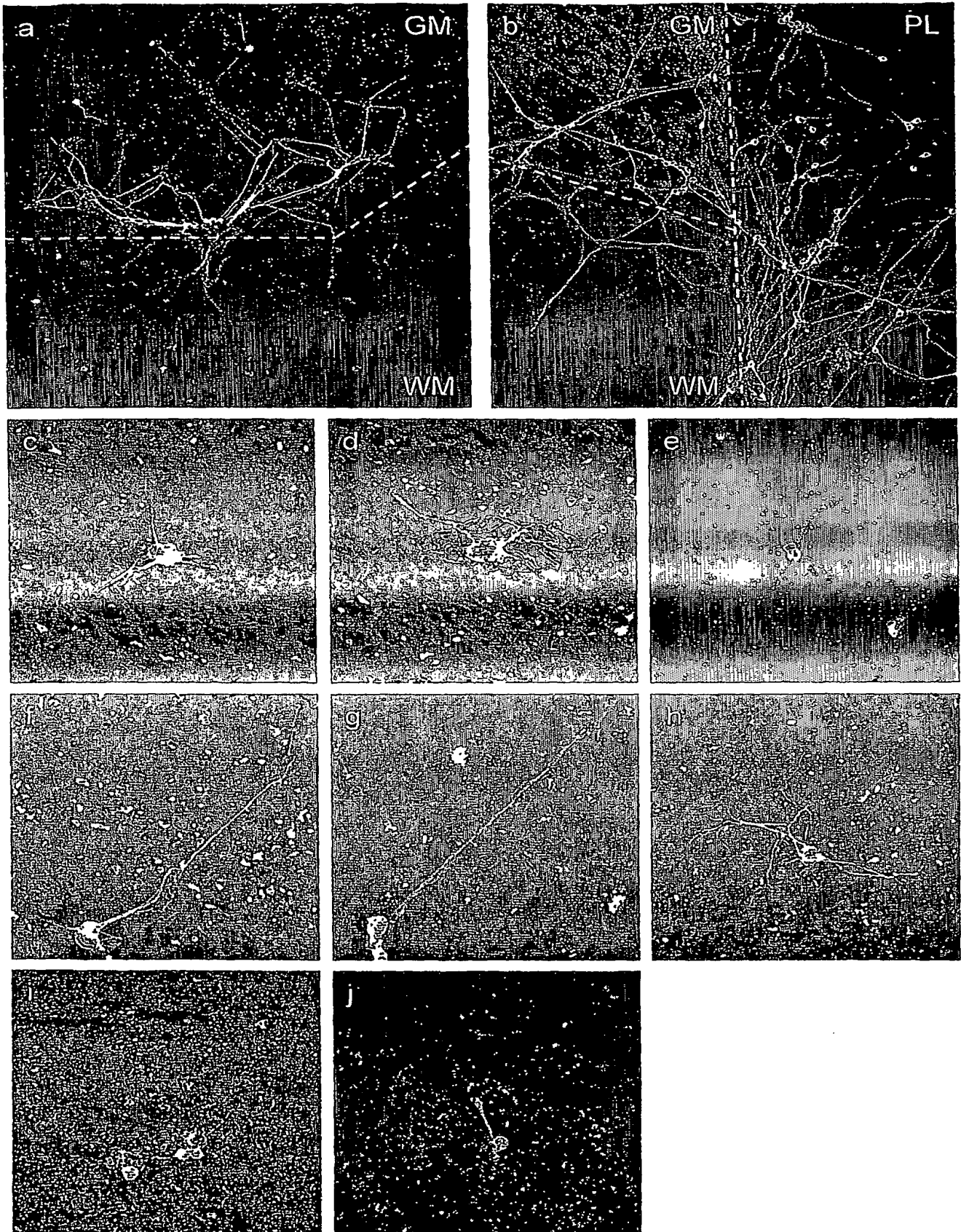
FIG 9

FIG. 10

FIG. 11
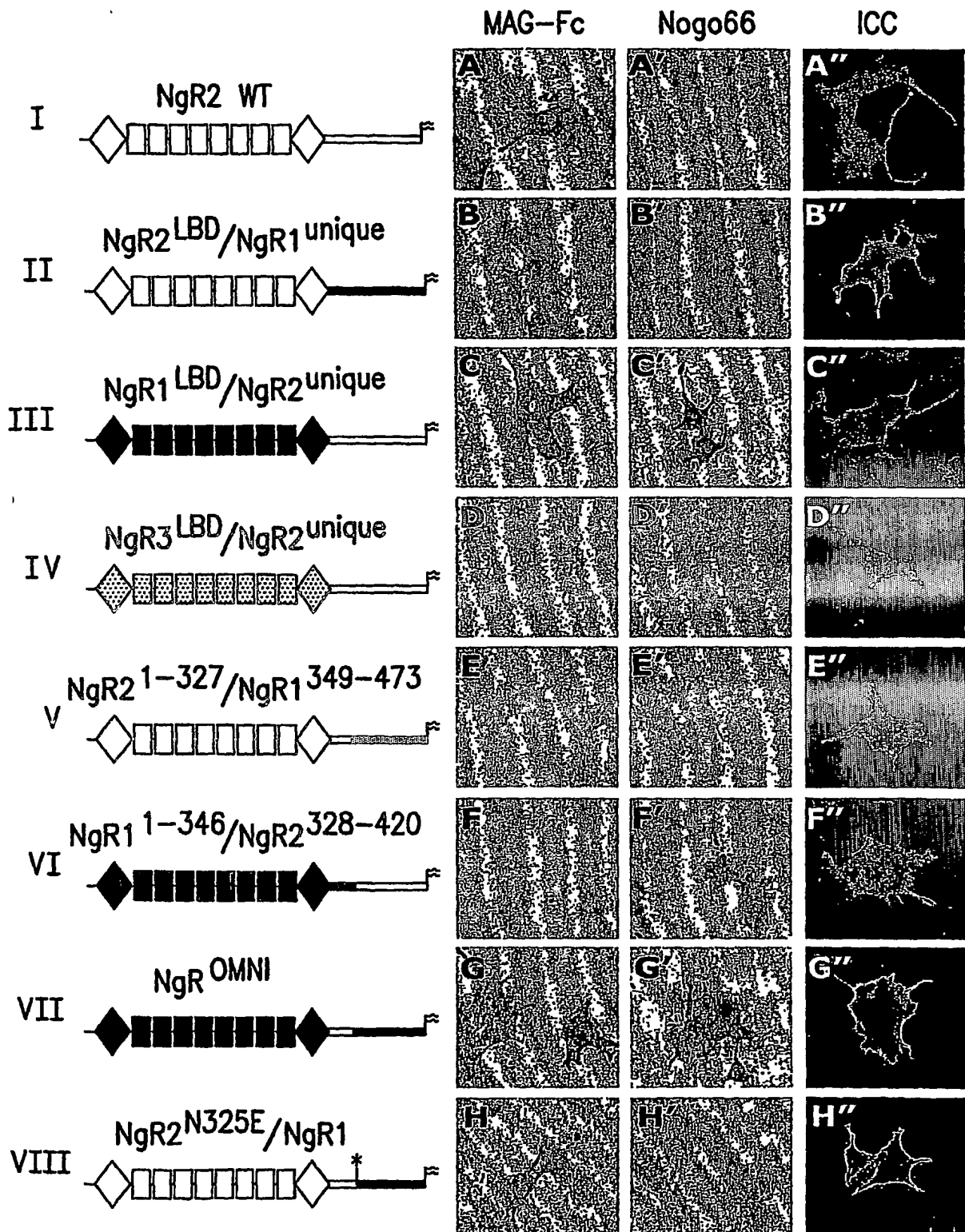
FIG.12a

Spe1

Spe1

```
NgR1    309   CAVASG PTRPFQTNQLTDEELLGLPKCCQPDAADKASVLEPGRPAS
NgR2    310   CPPPT-------------------------PTRPGSRARGNSSSNHLYG
                                                          *
NgR3    304   CTGPASPHQIKSHTLSTSDRAARKEHHPSHGASRDKGH-PHGHLPG
```

FIG. 12b

FIG. 12c

FIG.13b

TRANSFECTION
NgR1
NgR2
p75NTR

TREATMENT
MAG-Fc

IP: anti-NgR1 BEADS
WB: anti-NgR2

IP: anti-NgR1 BEADS
WB: anti-Fc

WB: anti-NgR1

WB: anti-NgR2

WB: anti-p75NTR

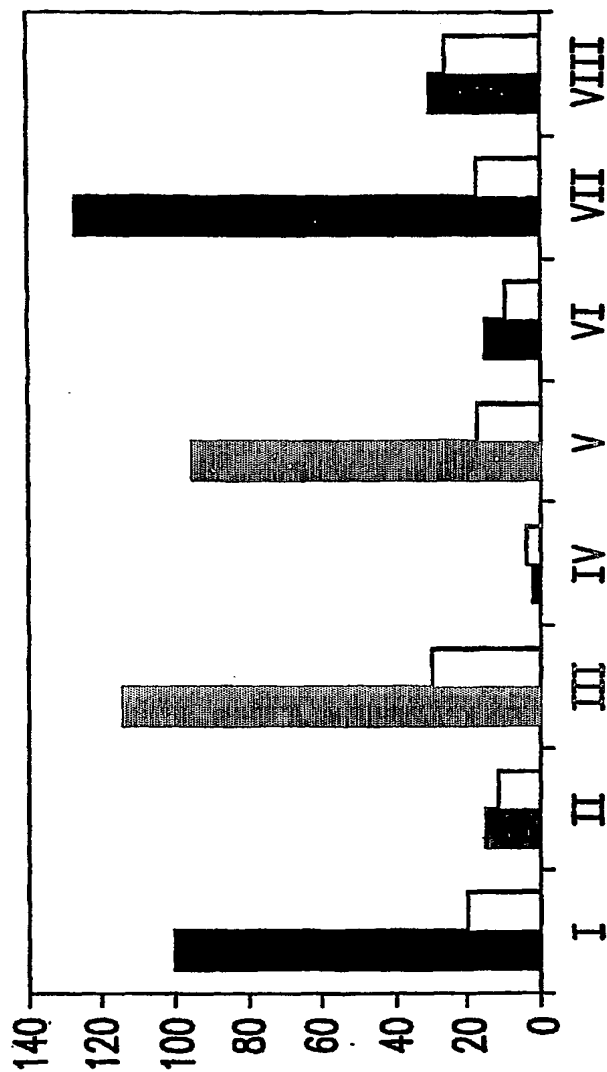ENTORHINAL CORTEX
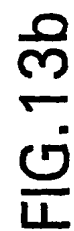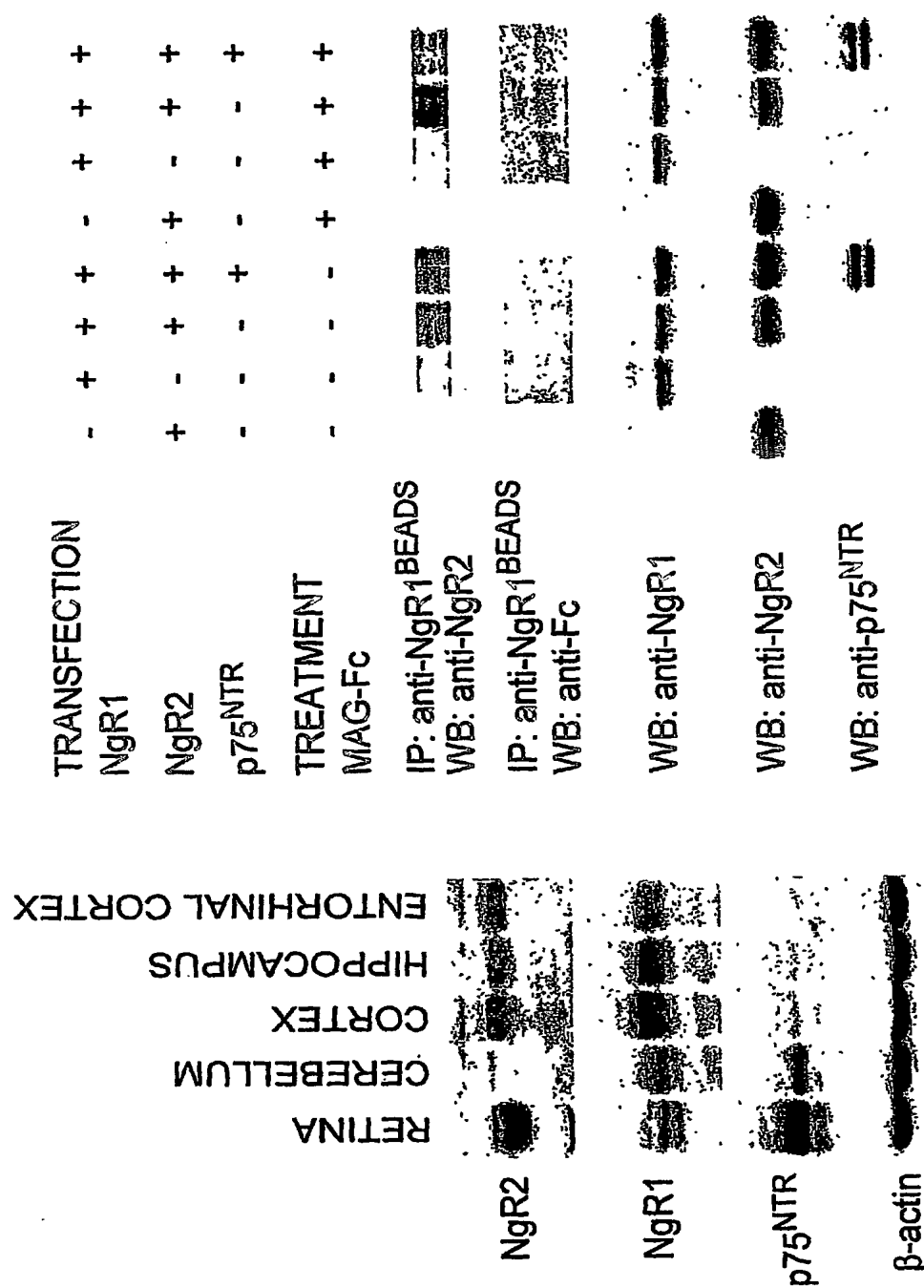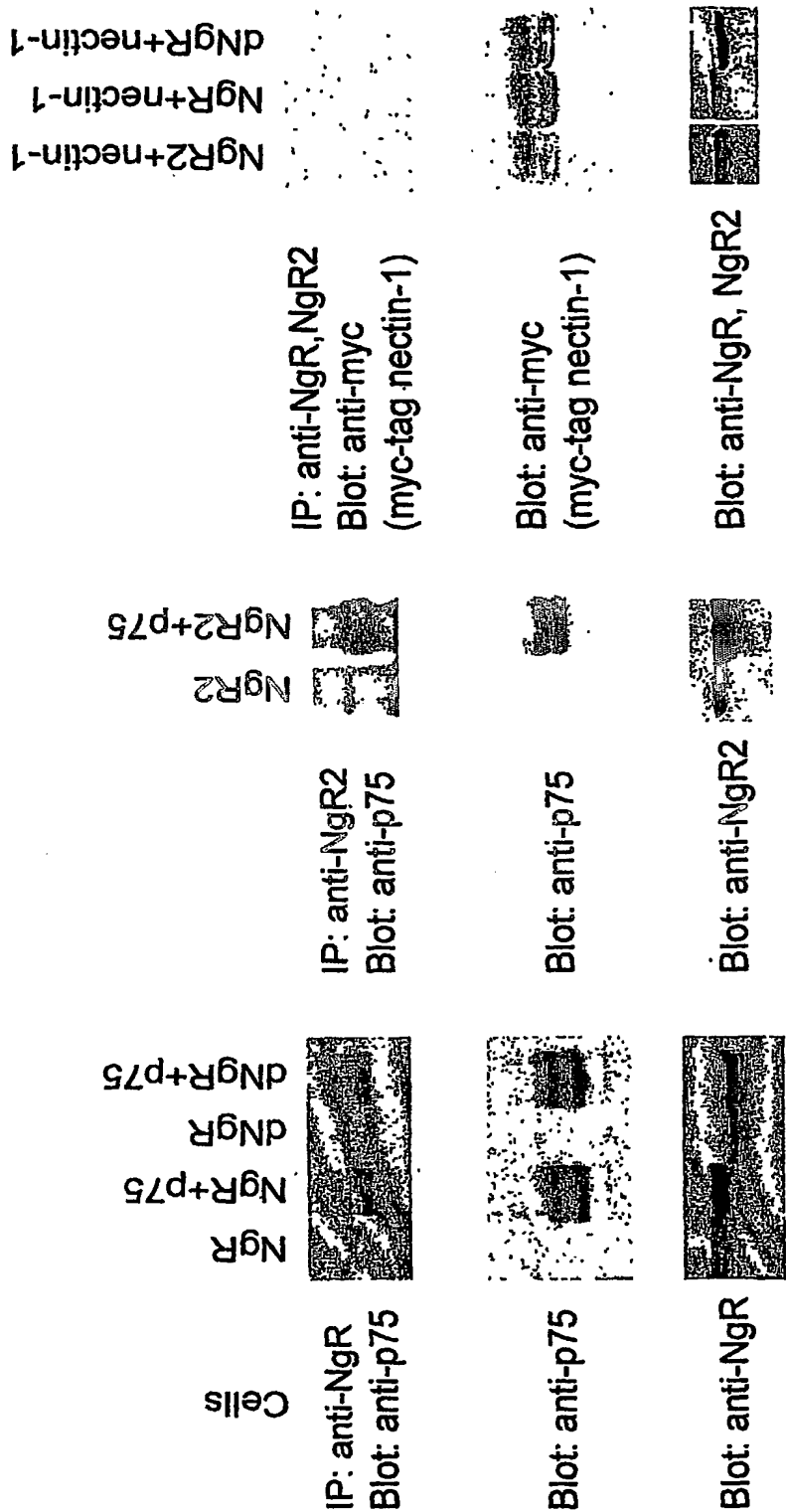HIPPOCAMPUS
CORTEX
CEREBELLUM
RETINA

NgR2

NgR1

p75NTR

β-actin

FIG.13a

NgR2 interacts with p75NTR

FIG. 14

FIG. 15